# AVHRR Aerosol Optical Thickness

CDRP-MM-0131 Rev 3 06/25/2014

## Climate Data Record (CDR) Maturity Matrix

| Maturity | Software Readiness | Metadata | Documentation | Product Validation | Public Access | Utility |
|---|---|---|---|---|---|---|
| 1 | Conceptual development | Little or none | Draft Climate Algorithm Theoretical Basis Document (C ATBD); paper on algorithm submitted | Little or None | Restricted to a select few | Little or none |
| 2 | Significant code changes expected | Research grade | C-ATBD Version 1+ ; paper on algorithm reviewed | Minimal | Limited data availability to develop familiarity | Limited or ongoing |
| 3 | Moderate code changes expected | Research grade; Meets int'l standards: ISO or FGDC for collection; netCDF for file | Public C-ATBD; Peer-reviewed publication on algorithm | Uncertainty estimated for select locations/times | Data and source code archived and available; caveats required for use. | Assessments have demonstrated positive value. |
| 4 | Some code changes expected | Exists at file and collection level. Stable. Allows provenance tracking and reproducibility of dataset. Meets international standards for dataset | Public C-ATBD; Draft Operational Algorithm Description (OAD); Peer-reviewed publication on algorithm; paper on product submitted | Uncertainty estimated over widely distributed times/location by multiple investigators; Differences understood. | Data and source code archived and publicly available; uncertainty estimates provided; Known issues public | May be used in applications; assessments demonstrating positive value. |
| 5 | Minimal code changes expected; Stable, portable and reproducible | Complete at file and collection level. Stable. Allows provenance tracking and reproducibility of dataset. Meets international standards for dataset | Public C-ATBD, Review version of OAD, Peer-reviewed publications on algorithm and product | Consistent uncertainties estimated over most environmental conditions by multiple investigators | Record is archived and publicly available with associated uncertainty estimate; Known issues public. Periodically updated | May be used in applications by other investigators; assessments demonstrating positive value |
| 6 | No code changes expected; Stable and reproducible; portable and operationally efficient | Updated and complete at file and collection level. Stable. Allows provenance tracking and reproducibility of dataset. Meets current international standards for dataset | Public C-ATBD and OAD; Multiple peer-reviewed publications on algortihm and product | Observation strategy designed to reveal systematic errors through independent cross-checks, open inspection, and continuous interrogation; quantified errors | Record is publicly available from Long-Term archive; Regularly updated | Used in published applications; may be used by industry; assessments demonstrating positive value |

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| 1 & 2 | Research |
| 3 & 4 | IOC |
| 5 & 6 | FOC |